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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,792	03/06/2002	Louis P. Huber	P04870US1	9696
22885	7590	06/10/2004	EXAMINER	
MCKEE, VOORHEES & SEASE, P.L.C.			PHAN, THIEM D	
801 GRAND AVENUE			ART UNIT	
SUITE 3200			PAPER NUMBER	
DES MOINES, IA 50309-2721			3729	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,792

Applicant(s)

HUBER ET AL.

Examiner

Tim Phan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Appeal Brief filed on 2/9/04 has been fully considered and made of record. In view of finding more pertinent prior art, a response to Applicants' A.B. is not relevant and hence is not made.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 33, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang et al (WO 99/53505) hereinafter '505 in view of Abe et al (US 6,311,390 B1) hereinafter '390 or vice versa.

As applied to claim 33, the '505 teaches a process of making electrical devices, comprising:

- separating a first chip resistor from a second chip resistor (Cf. Fig. 5, 10), each chip resistor comprising a substrate (Cf. Fig. 5, 17), a resistive element on the substrate and first and second end caps (Cf. Fig. 5, elements 31 & 51), electrically connected to opposite ends of the resistive elements (Cf. Fig. 5, 17);
- connecting the first end cap of the first resistor and the first end cap of the second resistor with a first barrier (Cf. Page 11, lines 6 ff.) to mechanically connect the first and second chip resistors;
- connecting the second end cap of the first resistor and the second end cap of the second resistor with a second barrier (Cf. Page 11, lines 6 ff.) to mechanically connect the first and second chip resistors to provide long term mechanical stability.

The '390 teaches a method of producing thermistor chip using the glass insulating material (Cf. Fig. 2, 50) to adhere different resistance bodies (Cf. Fig. 2, elements 2a, 3a & 4a) of thermistor chip due to its heat resistance and insulation characteristics (Cf. Col. 2, lines 39-41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the glass insulating material (as taught by the '390) due to its heat resistance and insulation characteristics, instead of the adhesive (Cf. Fig. 6, 53), which is taught by the '505.

As applied to claim 36, the '505 teaches the chip resistor devices of size at most 7mm or 0.27 inch (Cf. Page 12, lines 20 ff.).

As applied to claim 37, the '390 teaches the nickel plating at the outer electrodes or metal barrier (Cf. Col. 4, lines 44 ff.).

4. Claims 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '505 in view of the '390 and further view of Igarashi et al (US 6,124,769) hereinafter '769 or vice versa.

The '505 and 390 teach a method of making chip resistor which responds to applicant's claimed invention.

The '769 teaches a process of making chip resistor by printing ruthenium oxide base resistor on an alumina substrate at high temperature (Cf. Col. 1, lines 41 ff.), which is an old art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the three teachings by applying the process of printing ruthenium oxide base resistor on an alumina substrate (as taught by the '769) in order to produce a chip resistor that can sustain a high temperature reflow soldering. Alternatively since the use of the recited materials in Claims 34 and 35 are well known in this art, the teaching of the '769 is held to be cumulative, i.e. it is not required.

Response to Arguments

5. Applicant's arguments with respect to claims 33-37 have been considered but are moot in view of the new ground of rejection.

This Office Action is a **non-Final** Office Action.

Prosecution continues.

Furthermore the Office saith not.

Conclusion

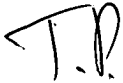
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 703-605-0707. The examiner can normally be reached on Monday - Friday, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter VO can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



Tim Phan
Examiner
Art Unit 3729


CARL J. ARBES
PRIMARY EXAMINER

tp
May 24, 2004